

LA-000040-02
Basic American Foods – Rexburg
Response to Facility Comments
September 3, 2008

The Idaho Department of Environmental Quality (DEQ) issued a draft Wastewater Reuse Permit to Basic American Foods - Rexburg on April 18, 2008 for review and comment. A news release requesting public comment on draft permit LA-000040-02 was disseminated to media and posted on DEQ's website on April 18, 2008.

- No public comments were received.
 - The Department received written comments from Basic American Foods regarding the April 18, 2008 draft permit on June 9, 2008. Following is the Department's response to Basic American Foods' June 9th comments:
1. **Comment: Section C: Abbreviations, Definitions- The following acronyms are not used in this permit and for clarity should be removed from this section: SAR, TDIS, and TMDL.**
Response: Both the acronyms TDIS and TMDL have been removed from the definitions section of the permit as requested; however, the facility is required to sample for SAR as stated in Table G-1, therefore this acronym will remain. See Section C of the attached permit.
 2. **Comment: Section D: Responsible Official- BAF has assigned facility managers to each of their Idaho facilities since the recent permit application. The new responsible official for the Rexburg facility should be: Joe Milligan, 40 East 7th North, Rexburg, Idaho 83440.**
Response: The information on the responsible official has been adjusted with the given information as requested. See Section D, Facility Information, Facility Contacts in the attached permit.
 3. **Comment: Section E: CA-040-01(Plan of Operation) - BAF operates their Idaho operations under a campus approach where all facilities are managed/operated with a common Plan of Operation. BAF requests clarification that this approach is a viable option for fulfillment of this activity. Based on DEQ's response additional time may be requested for this activity.**
Response: The compliance activity language has been modified to reflect that a common Plan of Operation is indeed acceptable given that it contains specific details on individual operations, sampling procedures, etc. which may differ between facilities. See CA-040-01, Section E of the attached permit.
 4. **Comment: Section E: CA-040-03 (Quality Assurance Project Plan) - BAF recently attended a "Town Hall" meeting with DEQ staff and other Industrial**

representatives where this topic was presented as a potential future addition to Reuse permits. The conclusions of the discussion was fairly clear that future work, in the area of templates or future guidance, would need to be developed prior to implementation of these plans as compliance activities in the permits. Historically, BAF has provided this type of documentation in our sampling analysis plans that have been developed onsite or through our contract consultants. Due to the lack of guidance on this topic BAF feels that this requirement is premature and the documentation would be better suited to the Plan of Operation.

Response: The Department concurs with this assessment of the current state of the QAPP requirement and will therefore revert to requiring Quality Assurance/Quality Control (QA/QC) materials as part of the Plan of Operation for this permit. See CA-040-01, Section E of the attached permit.

5. **Comment: Section E: CA-040-04 (Seepage Rate Testing) - BAF is concerned with the timing of this compliance activity and requests that the time frame be expanded to eighteen (18) months. This extension will allow for flexibility in completing this task during scheduled plant shutdowns.**

Response: The deadline for this compliance activity has been adjusted as requested. See Section E, CA-040-03 in the attached permit.

6. **Comment: Section E: CA-040-05 (Site Remediation Plan) - At this time, BAF does not plan to utilize field A-7 for the application of wastewater. BAF will continue to internally determine the viability of this site and at such time, in the future, will coordinate with DEQ to bring this site into the permitted acreage. Thus, BAF requests that this compliance activity be deleted from the permit.**

Response: As the facility no longer wishes to employ Field A-7 for land application, this activity has been removed from the permit and Field A-7 will not be permitted to receive wastewater.

7. **Comment: Section E: CA-040-06 (Ground Water Monitoring Wellhead Survey)- The timing of this activity, as currently stated in the draft permit, appears out of order in terms of providing valuable information to complete CA-040-07 (Ground Water Characterization Plan). Thus, BAF requests that the completion date for this compliance activity be modified to within six (6) months of the issuance of the permit.**

Response: The timing of this activity is designed to coincide with the completion of CA-040-05 (formerly CA-040-07), the Ground Water Characterization Plan, which calls for additional wells to be added to the network as well as the reconditioning and recompletion of the current network wells. The intent of the timing of CA-040-04 (formerly CA-040-06) is that all the wells, old, new, and newly refurbished, be surveyed at the same time, thereby contributing to the overall accuracy of the data collected from the updated network. As such, the

timing of this activity will remain as stipulated in the draft permit. See Section E, CA-040-05 of the attached permit.

8. **Comment: Section E: CA-040-07 (Ground Water Characterization Plan) -** *Based on the suggested timeframe modification in CA-040-06 and DEQ's recognition of the need to modify the groundwater sampling collection timeframes, BAF feels that this compliance activity needs to be rewritten to take into account the timing to complete the engineering survey and review the groundwater for at least 3 sampling events with the new sampling schedule. Thus, BAF is recommending the following language for this compliance activity: A monitoring well network evaluation that determines if existing wells are suitable to detect and quantify impacts to groundwater as a result of land application of process water; and, if additional monitoring points, groundwater quality data, or aquifer characterization are required to characterize up-and-down gradient groundwater conditions at the Plant and Salem sites. A final report with recommendations to be submitted within 24 months after issuance of the permit.*

Response: BAF completed a study similar to the proposal above for the Salem Farm in 2006. This study recommended the addition of 4 monitoring wells to the site's network, which CA-040-05 (formerly CA-040-07) directs the facility to submit plans for and complete within 18 months of permit issuance. This activity also provides for the evaluation and refurbishment of Plant Farm wells T-1 through T-10 and the Salem Farm FM series wells, either via replacement or recompletion, as necessary, as these wells have been periodically or consistently dry for a number of years or may be experiencing ground water quality standard exceedances due in part to the well construction. Due to the high non-growing application rates which have been requested it is extremely important that both farms monitoring well networks be comprehensive, accurate, and functioning properly—and that these things occur within an expeditious timeframe. In keeping with these goals, the Department requests that the Ground Water Characterization Plan compliance activity be completed as stipulated in Section E, CA-040-05 of the attached permit.

9. **Comment: Section E: CA-040-08 (Well Location Acceptability Analyses) -** *BAF has monitored domestic water wells within ¼ mile as an internal policy without the stipulations of a regulatory permit requirement. BAF plans to continue this practice but is concerned with the lack of clarity within this compliance activity and is requesting the following language change and extension of time frame to eighteen (18) months to better coincide with other groundwater related activities: Submit to the Department for review and approval, a well location acceptability analysis for domestic and municipal wells within ¼ mile radius of the Plant and Salem sites, as outlined in the Guidance for Reclamation and Reuse of Municipal and Industrial Wastewater.*

Response: The compliance activity has been modified as suggested, with minor grammatical adjustments. See Section E, CA-040-06 in the attached permit.

- 10. Comment: Section E: CA-040-09 (Runoff Management Plan) - BAF is concerned with the contents and the timing of this compliance activity and requests that the following changes be made: the time frame should be extended to eighteen (18) months and any construction projects associated with the plan should have an alternative timeframe that is negotiated with BAF and DEQ. This extension will allow flexibility in completing this task around scheduled plant activities and does not require all construction phases to be completed within eight (8) months of permit issuance which is very difficult to complete.**

Response: The timing of the compliance activity has been altered as requested; however, the language is standard and as such will remain as stipulated in Section E, CA-040-07 in the attached permit.

- 11. Comment: Section F: Non-Growing Season Hydraulic Loading Rate – BAF is very concerned with the rates that are specified within this category. The majority of this concern is due to the operational limitation in the winter months with any irrigation conveyance that are not pivot machines. In reviewing the documents, it appears that DEQ acted in response to the most current revision to the permit application which requested use of all acreage at the Plant and Salem Farms. BAF has reevaluated this non-growing season operational practice and now wishes to apply wastewater utilizing the acreage covered by pivot irrigation machines only. The staff analysis does recognize the need to manage the production plant flows but there has been no formal reply to BAF's request for additional hydraulic loading rates. BAF suggests that the additional hydraulic loading rates be reevaluated and as a minimum the hydraulic capacity be redistributed to the pivoted acreage at the Plant and Salem Farms.**

Response: Since no alternate generation rate was specified, the Department has redesigned the non-growing season loading rates using the 1.1 MG per day rate quoted in the 2006 permit application, distributing the water under areas which are shown to be covered by pivot irrigation. This has limited non-growing season application to Fields A-1 through A-5 at the Plant Farm and S-1, S-2, S-3 and S-5 at the Salem Farm, for a combined total of 569.2 acres available for winter land application, versus the 705.2 originally quoted in the application. This reduction in acreage results in a significant increase in application rates and could pose ground water contamination concerns. In order for the Department to allow application rates of this magnitude, each HMU will not only have a total seasonal application rate which is weighted according to AWC, but also a total monthly loading limit that was determined through modeling of COD application rates and the potential for anoxic soil conditions. By limiting both the amount of wastewater which can be applied per month as well as wintertime COD application rates, the Department hopes to prevent the development or

furtherance of anoxic soil conditions, and potential ground water contamination, while still accommodating the facility's land application rate needs. See Non-Growing Season Maximum Hydraulic Loading Rates, Section F of the attached permit.

- 12. Comment: Section F: Ground Water Quality- In review of other regional permits, BAF recommends the following modification in order to maintain consistency: Ground water quality shall be in compliance with Ground Water Quality Rule (GWQR), IDAPA 58.01.11. For areas where ground water degradation has occurred due to land application activities, Sections 58.01.11.400.03 and 58.01.11.400.05 shall apply.**

Response: The above is non-standard language which was used in a permit for a specific facility at the Idaho National Laboratory (INL). The non-standard ground water language in that permit was a unique exception due to the extenuating circumstances surrounding that specific site and as such shall not be replicated in LA-000040-02. See Ground Water Quality, Section F for the attached permit for the language which is applicable for this facility.

- 13. Comment: Section F: Maximum COD Loading (25 lb/ac-day during the NGS) - BAF is very concerned with the specified rate within this category. While it is desirable to have this goal, this limit is very difficult, if not impossible to meet with limited acreage and with the operational limitations associated with the winter months. In review of other regional permits this limitation has not been imposed and recent DEQ annual report reviews have not highlighted this as an environmental concern. BAF continues to improve and upgrade our internal waste reduction efforts and manage the farm with even applications of wastewater. Thus, BAF suggests that this loading limitation be removed or as a minimum the loading rate be increased to 50 pounds/acre-day.**

Response: In light of the high non-growing season loadings that the facility has requested, the Department has concerns about the development of anoxic soil conditions and the promotion of ground water degradation during the winter months. It was in the hopes of staving off these conditions that the 25 lb/ac-day limit was proposed; however, the Department acknowledges that this limit may have proved difficult to meet, given recent wastewater concentrations and application rates. However, as was discussed in Item 11, the reduction in available non-growing season acreage means that application rates to each field will need to be increased by a fairly significant amount, raising the potential for ground water contamination. In order to accommodate the needs of the facility while still being mindful of the pertinent environmental concerns, a non-growing season COD loading rate of 35 lb/ac-day is being suggested. From 2004-2007 the Plant Farm averaged an NGS loading of 31.1 lb/ac-day and the Salem Farm averaged 25.7 lb/ac-day. Therefore, with adequate management and distribution practices, this limit should prove to be sufficient; however, if the facility feels that they may be unable to meet this requirement, an appeal may be made for an

elevated limit with the submission of adequate justification that higher loadings will not induce depressed soil redox conditions, cause solubilization of Fe/Mn, and/or promote subsequent ground water contamination. See Maximum COD Loading, Section F of the attached permit.

- 14. Comment: Section F: Sampling and Monitoring Requirements – While BAF is not currently considering utilizing our “in-house” laboratory for compliance sampling the language in the category precludes this event in the future. With no State requirement for wastewater laboratory certification this statement is out of context. BAF is aware of recent issue that we have had with replacing “in-house” and “contract” laboratory results for use in the determination of permit compliance. BAF recommends that the language in this category be rewritten to allow the use of “in-house” laboratory if the appropriate documentation is approved and maintained onsite.**

Response: The Department agrees provided BAF follows all procedures and protocols outlined in the approved Plan of Operation, as required in Section E, Compliance Activity CA-040-01.

- 15. Comment: Section G: Monitoring Requirements – The soil and ground water procedures listed in this section are very specific and appears out of place in a permit. BAF feels that the language in this subsection should be required within a Sampling Analysis Plan of a Quality Assurance Project Plan (once adequate documentation is supplied by DEQ).**

Response: The language contained within this section which describes sampling and monitoring procedures is standard for all DEQ Wastewater Reuse permits and as such will remain unchanged. See Monitoring Requirements, Section G of the attached permit.

- 16. Comment: Section G: Table G-1 Facility Monitoring Table, Groundwater- Replace ortho Phosphorus with dissolved total Phosphorus—to ensure BAF can obtain representative Phosphorus values. Remove Total Iron and Total Manganese—to ensure BAF can obtain representative values without sedimentation influences. Delete the requirement to submit annual groundwater contour map—the baseline information is already supplied and BAF does not see the added value in expending the extra resources to complete this task.**

Response: With regard to the required sampling parameters mentioned, ortho phosphorus is a standard ground water sampling requirement, one which is more pertinent for environmental monitoring purposes than total phosphorus and which DEQ wishes to remain in the permit. Likewise, Total Iron and Manganese are also standard ground water sampling requirements; the facility's sedimentation concerns should be addressed by the fact that if either Total Fe or Mn exceeds the ground water quality standard they are required to sample for the dissolved component. The Department has discussed and resolved the facility's issue

concerning annual ground water contour map submittal and as such it will remain in the permit. See Table G-1 in the attached permit.

- 17. Comment: Section G: Table G-1, Facility Monitoring Table, Soils- Delete the requirement for % organics—this information is not used by BAF to manage farm operations. Replace electrical conductivity with soluble salts—to ensure BAF can obtain representative values for farm management. Modify the language to state that the annual waste solids loading calculation are not required if they are not applied to the permitted acreage (current BAF practice).**

Response: The waste solids loading calculation requirement has been modified as requested; however, the other sampling requirements mentioned are standard and as such will remain unchanged. The Department requires permittees to sample for % organic matter in order to estimate how much plant available nitrogen may be mineralized over the course of the growing season. As a facility that applies a fairly significant amount of nitrogen via their wastewater, it is important that this property continue to be monitored and accounted for in the annual nitrogen loading “budget”. Similarly, BAF also applies wastewater that has a rather high TDS concentration which may result in salt build-up in the soil; the Department prefers that electrical conductivity, rather than soluble salts, be used as a measure of soil salt concentrations. See Table G-1 in the attached permit.

- 18. Comment: Section G: Table G-1, General- Recommend reviewing all of the compliance dates for all activities in this section to ensure that they are consistent with the permit issuance date.**

Response: The permit originally required the facility to sample the soil for DTPA Iron and Manganese in 2007 and 2011 only. This is obviously not compatible with the current permit issuance timeline, as was pointed out by the facility, and as such the language has been adjusted to require sampling on the first and last years of the permit only. See Table G-1 in the attached permit.

- 19. Comment: Section H: Standard Reporting Requirements, Item 2- As discussed above, BAF requests that the requirement to provide annual ground water contour mapping be deleted as a requirement of the annual report.**

Response: As was previously mentioned, DEQ has resolved this issue with the facility and as such the reporting requirement will remain as written. See Item 2 in Section H of the attached permit.

- 20. Comment: Section H: Standard Reporting Requirements, Item 3- BAF requests that the additional copy that is required to be mailed to the DEQ Boise office either be deleted or as an option be provided to the Idaho Falls Regional office.**

Response: All language contained within Section H is standard for all DEQ Wastewater Reuse permits and as such is not available for modification at this time. See Item 3 in Section H of the attached permit.

21. Comment: Section I: Standard Permit Conditions, Procedures and Reporting, Item 6- BAF requests that the language be clarified to state that if the seepage testing was completed and submitted to DEQ during the permit term that there is no need for a redundant submission.

Response: All wastewater reuse facilities with lagoons are required to seepage test these structures every 5 years. The intent of this item is for permit holders to submit the results of new seepage tests with their permit renewal application every 5 years, prior to DEQ issuing a new permit. Because the mud settling basins have not been tested since construction, the initial seepage test is required within 18-months of permit issuance (see Compliance Activity CA-040-03). To get on schedule with the 5-year testing cycle, another seepage test will need to be performed toward the end of the permit cycle, with the testing results included in the permit renewal package at that time. From that point forward, a seepage test will only be required at the end of each permit cycle, with the test results included in the permit renewal package. BAF will not be required to perform two seepage tests every permit cycle.

-----End of Comments-----